Hangzhou Lan Ao Technology Co., Ltd

Product Catalogue

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Multiplex Drug-resistant Bacterial Gene Detection Reagents

Hangzhou Lan Ao Technology Co., Ltd
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Multiplex Drug-resistant Bacterial Gene Detection Reagents

Methicillin Resistant Staphylococcus Aureus Resistance Gene Detection Kit
Acinetobacter Baumannii Carbapenem Resistant Gene (OXA23) Detection Kit
Vancomycin Resistant Enterococcus Gene (vanA, vanB) Detection Kit
Klebsiella Pneumoniae and Carbapenem Resistant Antibiotic Gene KPC Detection Kit
Klebsiella Pneumoniae and Three Carbapenem Resistance Gene Detection Kit (NDM, KPC, and OXA-48)
Tobacco Aspergillus, Aspergillus Flavus, and Aspergillus Niger Nucleic Acid Detection Kit

Overview

Multidrug resistant bacteria have become important pathogens in hospital infections, causing complex and difficult to treat infections. Among them, MRSA, CRAB, VRE, and CRKP are the most common multidrug-resistant bacteria in clinical practice. Currently, the culture+drug sensitivity detection method cannot achieve accurate diagnosis and meet the requirements of rapid clinical detection. Fluorescence PCR method has higher accuracy and specificity, and can effectively complement the culture+drug sensitivity method.

Applicable Population

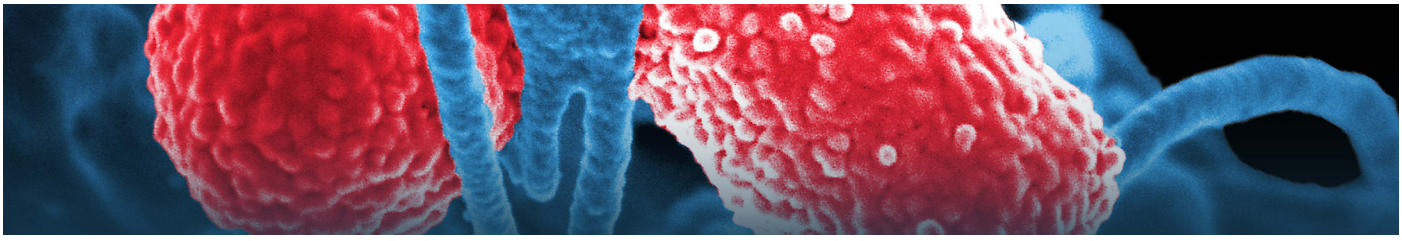
① Elderly or infants suspected of infection
② Immunocompromised patients
③ Patients undergoing invasive procedures
④ Patients who have received treatment with three or more antibiotics within 90 days
⑤ Patients who have been hospitalized multiple times or for a long time
⑥ Patients who have a history of colonization or infection with multidrug-resistant bacteria in the past

Suggested testing time

- Screening for drug-resistant bacteria in hospital infection
- Entering the ICU, throughout the treatment process, and before transferring to a regular ward
- Key drug-resistant bacteria are commonly found in infection departments, wards, or before discharge

Sample collection suggestions

Main specimen types: sputum (recommended morning sputum ≥3ml) or throat swab; Other samples can be collected based on the infection situation (site of infection), such as mid stream urine (recommended morning mid stream urine ≥5ml) and body fluids (≥3ml), bronchial aspirates, bronchoalveolar lavage fluid, pleural and peritoneal fluid, pericardial effusion, cerebrospinal fluid, and pus.



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Report Interpretation

Test results	Strain	First Choice	Secondary Choice
Staphylococcus aureus gene femA:+ Methicillin resistant Staphylococcus aureus mecA:+	Methicillin resistant golden yellow staphylococcus;	Vancomycin, Norvancomycin, Teicoplanin, Linezolid;	Daptomycin, Cefuroxime, Compound Sulfamethoxazole, Tigecycline;
Staphylococcus aureus gene femA:+ Methicillin resistant Staphylococcus aureus gene mecA:-	Staphylococcus aureus;	Penicillin, Cefuroxime, Cefazolin, Chlorpromazine;	Rifampicin, Ampicillin, Sulbactam;
Acinetobacter baumannii gene OXA51:+ Carbapenem resistant gene OXA23:-	Baumann Acinetobacter baumannii, Non carbapenem resistant OXA23 gene resistance;	Cefoperazone/sulbactam (conventional dose), Imine Imipenem, Meropenem;	Amikacin, Minocycline;
Acinetobacter baumannii gene OXA51:+ Carbapenem resistant gene OXA23:+	Carbapenem resistant Acinetobacter baumannii;	Cefoperazone/Sulbactam (increased dosage), Tigecycline, Polymyxin B;	Aminoglycosides, or Carbapenems (used in combination with the previous ones), Colistin;
Enterococcus gene 16s rDNA:+ Vancomycin resistant Enterococcus gene vanA:- Vancomycin resistant Enterococcus gene vanB:-	Enterococcus;	Vancomycin, Norvancomycin, Nitrofurantoin, and Fosfomycin (limited to urinary tract infections);	Penicillin or Ampicillin;
Enterococcus gene 16s rDNA:+ Vancomycin resistant Enterococcus gene vanA:+ Vancomycin resistant Enterococcus gene vanB:-	Type A vancomycin resistant enterococci;	Linezolid, Daptomycin;	Tigecycline, Phosphomycin (limited to urinary tract infections);
Enterococcus gene 16s rDNA:+ Vancomycin resistant Enterococcus gene vanA:- Vancomycin resistant Enterococcus gene vanB:+	Type B vancomycin resistant enterococci;	Teicoplanin, Linezolid, Daptomycin;	Tigecycline, Phosphomycin (limited to urinary tract infections);
Klebsiella pneumoniae gene phoE:+ KPC, a carbon tolerant enzyme gene:- Internal standard int:+	Klebsiella pneumoniae, Non KPC type resistance;	Imipenem, Meropenem, Doripenem, Ertapenem, Ceftriaxone;	/
Klebsiella pneumoniae gene phoE:+ KPC, a carbon tolerant enzyme gene:+ Internal standard int:+	Klebsiella pneumoniae, KPC type resistance;	Polymyxin, Tigecycline, Phosphomycin, Ceftazidime/ Avibactam Sodium;	Doxycycline, Amikacin, Ipamikacin, Tobramycin and Gentamicin, Amlodipine/ Avibactam;
Klebsiella pneumoniae gene phoE:- KPC, a carbon tolerant enzyme gene:+ Internal standard int:+	Carbon resistant Klebsiella pneumoniae (KPC type);		

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Methicillin resistant Staphylococcus aureus resistance gene detection kit

This product is used for in vitro qualitative detection of the specific resistance genes mecA and femA of methicillin-resistant Staphylococcus aureus in human sputum and throat swab samples. The abuse of antibiotics has led to an increasing incidence of methicillin-resistant Staphylococcus aureus (MRSA) infections, mainly in the lungs, and has become the main pathogenic bacterium for hospital acquired lung infections. It exhibits high resistance and multidrug resistance, and is widely resistant to other antibiotics except for glycopeptide antibiotics.

Acinetobacter baumannii carbapenem resistant gene (OXA23) detection kit

This product is used for in vitro qualitative detection of the intrinsic gene OXA51 of Acinetobacter baumannii and the carbapenem resistant gene OXA23 of Acinetobacter baumannii in human sputum samples.

Carbapenem resistant Acinetobacter baumannii (CRAB) exhibits high resistance and multidrug resistance. Acinetobacter baumannii is a conditionally pathogenic bacterium that can cause wound infections, urinary system infections, sepsis, hospital acquired pneumonia, and central nervous system infections. It has become one of the serious pathogens causing hospital acquired infections.

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Vancomycin resistant Enterococcus gene (vanA, vanB) detection kit

This product is used for in vitro qualitative detection of 16S rDNA of Enterococcus genes and vancomycin resistant Enterococcus specific genes vanA and vanB in human urine samples.
Vancomycin resistant Enterococcus (VRE) is a common bacterium in the upper respiratory tract, oral cavity, or intestinal tract of humans and animals. When it colonizes other mucosal areas, it can cause clinical infections such as endocarditis, with a mortality rate of 21.0% to 27.5%. VRE is a major hospital acquired pathogen worldwide. Among them, the main pathogenic bacteria to humans are Enterococcus faecalis and Enterococcus faecium, with the most common resistance genotypes being vanA and vanB.

Klebsiella pneumoniae and carbapenem resistant antibiotic gene KPC detection kit

This product is used for in vitro qualitative detection of the outer membrane phosphoprotein phoE gene and KPC gene of Klebsiella pneumoniae in human sputum samples.
Klebsiella pneumoniae is a gram-negative bacterium that exists in the upper respiratory tract and intestines of the human body. When the body's resistance decreases, it easily enters the lungs through the respiratory tract. When growing and reproducing within the alveoli, it can cause tissue necrosis, liquefaction, and the formation of single or multiple abscesses. When the lesion involves the pleura and pericardium, it can cause exudative or purulent fluid accumulation. Klebsiella pneumoniae carbapenemases (KPC) are a newly discovered class of carbapenemases that can hydrolyze various β -lactam antibiotics, including carbapenem antibiotics. The KPC gene is located on a transferable granule and can spread between strains, forming carbapenem resistant Klebsiella pneumoniae (CRKP). CRKP is a potential risk factor for alcoholism, diabetes and chronic obstructive pulmonary disease patients with pulmonary infection, which can cause pneumonia, urinary tract infection, meningitis, systemic sepsis, etc.

Klebsiella pneumoniae and three carbapenem resistance gene detection kit (NDM, KPC, and OXA-48)

This product is used for in vitro qualitative detection and isolation of three major carbapenem resistant genes in bacterial colonies, including NDM, KPC, and OXA-48, as well as Klebsiella pneumoniae.
Enterobacteriaceae bacteria that are resistant to any carbapenem such as imipenem, meropenem, or etapenem are defined as carbapenem resistant Escherichia coli (CRE). Carbapenem drugs are the most potent beta lactam drugs for treating Gram negative bacterial infections, especially in the Enterobacteriaceae family. Once carbapenems become resistant, clinical treatment of such bacterial infections will face great difficulties. Currently, carbapenem resistant Enterobacteriaceae (CRE) bacteria have emerged and been reported in many countries. There is no difference in clinical manifestations between CRE infected patients and those infected with sensitive bacteria. The main types of infections include urinary tract infections, wound infections, hospital acquired pneumonia, ventilator-associated pneumonia, bloodstream infections, catheter-related infections, etc. CRE mainly occurs in Klebsiella pneumoniae. This kit aims to detect three major carbapenem resistant genes and Klebsiella pneumoniae.

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Tobacco Aspergillus, Aspergillus flavus, and Aspergillus niger nucleic acid detection kit

This product is used for in vitro qualitative detection of Aspergillus fumigatus, Aspergillus flavus, and Aspergillus niger nucleic acids in human sputum samples, and can be used to identify Aspergillus fumigatus separately.

Pulmonary aspergillosis is a serious pulmonary infectious fungal disease, most commonly found in immunocompromised patients, with Aspergillus fumigatus infection being the most common and pathogenic, accounting for over 90% of aspergillosis infections. In recent years, the incidence rate and mortality rate of pulmonary aspergillosis are increasing year by year. Among them, invasive pulmonary aspergillosis (IPA) is the main form of pulmonary aspergillosis. Some studies have shown that the prevalence rate of IPA is as high as 15%. This kind of infection is mostly seen in the host with low immunosuppression, neutropenia or lack of granulocytes. The mortality rate can be as high as 50%, which seriously affects the life and health of patients. The test results of this kit are for clinical reference only and should not be used as the sole criterion for clinical diagnosis. It is recommended to conduct a comprehensive analysis of the patient's condition based on their clinical manifestations and other laboratory tests.

Order Information

Product Item Number	Product Name	Product Model/Specification
GN00035	Methicillin resistant Staphylococcus aureus resistance gene detection kit	20 Tests/Box
GN00037	Acinetobacter baumannii carbapenem resistant gene (OXA23) detection kit	20 Tests/Box
GN00036	Vancomycin resistant Enterococcus gene (vanA, vanB) detection kit	20 Tests/Box
GN00050	Klebsiella pneumoniae and carbapenem resistant antibiotic gene KPC detection kit	20 Tests/Box
GN00053	Klebsiella pneumoniae and three carbapenem resistance gene detection kit(NDM, KPC, and OXA-48)	20 Tests/Box
GN00052	Tobacco Aspergillus, Aspergillus flavus, and Aspergillus niger nucleic acid detection kit	20 Tests/Box

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